

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :
Hideaki FUKUZAWA, et al. : EXAMINER: UNASSIGNED
SERIAL NO.: New Continuation Application :
FILED: Herewith : GROUP ART UNIT: UNASSIGNED
FOR: MAGNETORESISTANCE EFFECT ELEMENT,
MAGNETIC HEAD, MAGNETIC HEAD
ASSEMBLY, MAGNETIC STORAGE SYSTEM

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Prior to examination on the merits, please amend this application as follows:

IN THE SPECIFICATION

Page 109, beginning at line 21, please delete the paragraph and replace it with the following new paragraph:

To realize such good close-packed plane orientation, the spin valve films may be formed in an atmosphere with impurities such as oxygen gas and others therein being minimized as much as possible. For example, for forming the films, employable are a deposition method in which is used an apparatus capable of pre-degassing the system to a level of around 10^{-9} Torr; a deposition method in which is used a sputtering target of which the oxygen content is lowered to at most 500 ppm; a substrate bias sputtering method in which a controlled degree of energy is applied to the sputtered atoms while the atoms are

deposited on the substrate; and a deposition method in which a underlayer of a simple noble metal of, for example, Au, Cu, Ag, Ru, Rh, Ir, Pt, Pd or the like, or a underlayer of an alloy of any of those noble metals, of an Ni-based alloy layer of NiFe, NiCu, NiFeCr, NiFeTa or the like is provided between the alumina gap layer and the spin valve film.

IN THE CLAIMS

Please cancel Claims 1-28 and 34-36 without prejudice.

REMARKS

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 29-33 are pending in the present application. Claims 1-28 and 34-36 have been canceled by the present amendment.

This application is a continuation-type application of Serial No. 09/332,440, filed on June 14, 1999 (i.e., the parent application). The specification has also been amended in the same fashion as in the parent application.

Consequently, an action on the merits is earnestly solicited.

Respectfully submitted,

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